



MAJOR SOURCE OPERATING PERMIT

Permittee: **Mobile Energy, LLC**
Facility Name: **Hog Bayou Energy Center**
Facility No.: 503-8066
Location: Mobile, Mobile County, Alabama

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date: **DRAFT**

Expiration Date:

TABLE OF CONTENTS

GENERAL PERMIT PROVISOS	3
SUMMARY PAGE FOR 178 MW NATURAL GAS/DISTILLATE FUEL OIL FIRED COMBUSTION TURBINE WITH A 585 MMBTU/HR NATURAL GAS FIRED DUCT BURNER AND HEAT RECOVERY BOILER WITH SELECTIVE CATALYTIC REDUCTION (SCR)	14
PROVISOS FOR 178 MW NATURAL GAS/DISTILLATE FUEL OIL FIRED COMBUSTION TURBINE WITH A 585 MMBTU/HR NATURAL GAS FIRED DUCT BURNER AND HEAT RECOVERY BOILER WITH SELECTIVE CATALYTIC REDUCTION (SCR)	16
<i>Applicability.....</i>	<i>16</i>
<i>Emission Standards</i>	<i>16</i>
<i>Compliance and Performance Test Methods and Procedures.....</i>	<i>19</i>
<i>Emission Monitoring</i>	<i>19</i>
<i>Recordkeeping and Reporting Requirements.....</i>	<i>20</i>
<i>Acid Rain Requirements.....</i>	<i>21</i>
<i>CSAPR Requirements.....</i>	<i>21</i>
SUMMARY PAGE FOR MACT SUBPART ZZZZ – EXISTING EMERGENCY FIREWATER PUMP	22
PROVISOS FOR MACT SUBPART ZZZZ – EXISTING EMERGENCY FIREWATER PUMP	23
<i>Applicability.....</i>	<i>23</i>
<i>Emission Standards</i>	<i>23</i>
<i>Compliance and Performance Test Methods and Procedures.....</i>	<i>24</i>
<i>Emission Monitoring</i>	<i>24</i>
<i>Recordkeeping and Reporting Requirements.....</i>	<i>25</i>
ACID RAIN PERMIT.....	ATTACHED

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>1. <u>Transfer</u></p> <p>This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.</p>	<p>Rule 335-3-16-.02(6)</p>
<p>2. <u>Renewals</u></p> <p>An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit.</p> <p>The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.</p>	<p>Rule 335-3-16-.12(2)</p>
<p>3. <u>Severability Clause</u></p> <p>The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.</p>	<p>Rule 335-3-16-.05(e)</p>
<p>4. <u>Compliance</u></p> <p>(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.</p> <p>(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.</p>	<p>Rule 335-3-16-.05(f)</p> <p>Rule 335-3-16-.05(g)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>5. <u>Termination for Cause</u></p> <p>This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.</p>	<p>Rule 335-3-16-.05(h)</p>
<p>6. <u>Property Rights</u></p> <p>The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.</p>	<p>Rule 335-3-16-.05(i)</p>
<p>7. <u>Submission of Information</u></p> <p>The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.</p>	<p>Rule 335-3-16-.05(j)</p>
<p>8. <u>Economic Incentives, Marketable Permits, and Emissions Trading</u></p> <p>No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.</p>	<p>Rule 335-3-16-.05(k)</p>
<p>9. <u>Certification of Truth, Accuracy, and Completeness:</u></p> <p>Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.</p>	<p>Rule 335-3-16-.07(a)</p>
<p>10. <u>Inspection and Entry</u></p> <p>Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental Management and EPA to conduct the</p>	<p>Rule 335-3-16-.07(b)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>following:</p> <ul style="list-style-type: none"> (a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit; (b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit; (c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit; (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements. 	
<p>11. <u>Compliance Provisions</u></p> <ul style="list-style-type: none"> (a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance. (b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit. 	<p>Rule 335-3-16-.07(c)</p>
<p>12. <u>Compliance Certification</u></p> <p>A compliance certification shall be submitted yearly no later than August 31st unless more frequent periods are specified according to the specific rule governing the source or required by the Department. The compliance certification shall cover the reporting period of July 1st through June 30th of each year.</p> <ul style="list-style-type: none"> (a) The compliance certification shall include the following: <ul style="list-style-type: none"> (1) The identification of each term or condition of this permit that is the basis of the certification; (2) The compliance status; (3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 	<p>Rule 335-3-16-.07(e)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);</p> <p>(4) Whether compliance has been continuous or intermittent;</p> <p>(5) Such other facts as the Department may require to determine the compliance status of the source;</p> <p>(b) The compliance certification shall be submitted to:</p> <p style="padding-left: 40px;">Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463</p> <p style="padding-left: 80px;">and to:</p> <p style="padding-left: 40px;">Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303</p>	
<p>13. <u>Reopening for Cause</u></p> <p>Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit:</p> <p>(a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire.</p> <p>(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.</p> <p>(c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions</p>	<p>Rule 335-3-16-.13(5)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>standards or other terms or conditions of this permit.</p> <p>(d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.</p>	
<p>14. <u>Additional Rules and Regulations</u></p> <p>This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.</p>	<p>§22-28-16(d), Code of Alabama 1975, as amended</p>
<p>15. <u>Equipment Maintenance or Breakdown</u></p> <p>(a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:</p> <ol style="list-style-type: none"> (1) Identification of the specific facility to be taken out of service as well as its location and permit number; (2) The expected length of time that the air pollution control equipment will be out of service; (3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period; (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; (5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period. <p>(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air</p>	<p>Rule 335-3-1-.07(1), (2)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.</p>	
<p>16. <u>Operation of Capture and Control Devices</u></p> <p>All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.</p>	<p>§22-28-16(d), Code of Alabama 1975, as amended</p>
<p>17. <u>Obnoxious Odors</u></p> <p>This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.</p>	<p>Rule 335-3-1-.08</p>
<p>18. <u>Fugitive Dust</u></p> <p>(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.</p> <p>(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:</p> <p>(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;</p> <p>(2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are</p>	<p>Rule 335-3-4-.02</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>created;</p> <p>(3) By paving;</p> <p>(4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;</p> <p>Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.</p>	
<p>19. <u>Additions and Revisions</u></p> <p>Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14.</p>	<p>Rule 335-3-16-.13 and .14</p>
<p>20. <u>Recordkeeping Requirements</u></p> <p>(a) Records of required monitoring information of the source shall include the following:</p> <p>(1) The date, place, and time of all sampling or measurements;</p> <p>(2) The date analyses were performed;</p> <p>(3) The company or entity that performed the analyses;</p> <p>(4) The analytical techniques or methods used;</p> <p>(5) The results of all analyses; and</p> <p>(6) The operating conditions that existed at the time of sampling or measurement.</p> <p>(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation</p>	<p>Rule 335-3-16-.05(c)2</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>and copies of all reports required by the permit</p>	
<p>21. <u>Reporting Requirements</u></p>	
<p>(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).</p> <p>(b) Deviations from permit requirements shall be reported within 48 hours or 2 working day of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.</p>	<p>Rule 335-3-16-.05(c)3</p>
<p>22. <u>Emission Testing Requirements</u></p>	
<p>Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.</p> <p>The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.</p> <p>To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:</p>	<p>Rule 335-3-1-.05(3) and Rule 335-3-1-.04(1)</p>
<p>(1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.</p> <p>(2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning).</p>	<p>Rule 335-3-1-.04</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>(3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control or influence the operations, and the rated capacity.</p> <p>(4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.</p> <p>A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.</p> <p>All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.</p>	<p>Rule 335-3-1-.04</p>
<p>23. <u>Payment of Emission Fees</u></p> <p>Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code R. 335-1-7-.04.</p>	<p>Rule 335-1-7-.04</p>
<p>24. <u>Other Reporting and Testing Requirements</u></p> <p>Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>25. <u>Title VI Requirements (Refrigerants)</u></p> <p>Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82, Subpart F.</p> <p>No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F.</p> <p>The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports</p>	<p>335-3-16-.05(a)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>shall be submitted to the US EPA and the Department as required.</p>	
<p>26. <u>Chemical Accidental Prevention Provisions</u></p> <p>If a chemical listed in Table 1 of 40 CFR Part 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then:</p> <ul style="list-style-type: none"> (a) The owner or operator shall comply with the provisions in 40 CFR Part 68. (b) The owner or operator shall submit one of the following: <ul style="list-style-type: none"> (1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or, (2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. 	<p>40 CFR Part 68</p>
<p>27. <u>Display of Permit</u></p> <p>This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.</p>	<p>Rule 335-3-14-.01(1)(d)</p>
<p>28. <u>Circumvention</u></p> <p>No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.</p>	<p>Rule 335-3-1-.10</p>
<p>29. <u>Visible Emissions</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise</p>	<p>Rule 335-3-4-.01(1)</p>

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>specified in the Unit Specific provisos of this permit.</p>	
<p>30. <u>Fuel-Burning Equipment</u></p>	
<p>(a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.03.</p>	<p>Rule 335-3-4-.03</p>
<p>(b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Rule 335-3-5-.01.</p>	<p>Rule 335-3-5-.01</p>
<p>31. <u>Process Industries – General</u></p>	
<p>Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.04.</p>	<p>Rule 335-3-4-.04</p>
<p>32. <u>Averaging Time for Emission Limits</u></p>	
<p>Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.</p>	<p>Rule 335-3-1-.05</p>
<p>33. <u>Permit Shield</u></p>	
<p>A permit shield exists under this operating permit in accordance with ADEM Admin. Code 335-3-16-.10 in that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance. The permit shield is based on the accuracy of the information supplied in Table E-1 of the renewal application for this permit. Under this shield, it has been determined that requirements listed as non-applicable in Table E-1 of the renewal application are not applicable to this source.</p>	<p>Rule 335-3-16-.10(1)</p>

Summary Page for 178 MW Natural Gas/Distillate Fuel Oil fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery boiler with Selective Catalytic Reduction (SCR)

Permitted Operating Schedule: 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limits	Regulation
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	PM	DB – 0.03 lb/MMBtu CT & DB: NG Firing: 0.009 lb/MMBtu & 14.2 lb/hr FO Firing: 0.011 lb/MMBtu & 21.7 lb/hr CT: FO Firing: 0.014 lb/MMBtu & 17.0 lb/hr	40 CFR 60 Subpart Da ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	NOx	CT – 75 ppmv adjusted for heat rate and fuel bound nitrogen (4-hr rolling average) DB – 1.6 lb/MWh CT & DB: NG Firing: 0.013 lb/MMBtu & 32.4 lb/hr FO Firing: 0.167 lb/MMBtu & 377.8 lb/hr (3-hr rolling average) CT: FO Firing: 0.167 lb/MMBtu & 331.0 lb/hr (3-hr rolling average)	40 CFR 60 Subpart GG 40 CFR 60 Subpart Da ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	SO ₂	CT – 0.015% by volume at 15% O ₂ on a dry basis or Sulfur content of fuels ≤ 0.8% by weight DB – 0.20 lb/MMBtu CT & DB: NG Firing: 0.00094 lb/MMBtu & 1.7 lb/hr FO Firing: 0.038 lb/MMBtu & 97.6 lb/hr CT: FO Firing: 0.049 lb/MMBtu & 97.0 lb/hr Sulfur content of fuel oil ≤ 0.05% 9,100,000 fuel oil usage limit	40 CFR 60 Subpart GG 40 CFR 60 Subpart Da ADEM Admin. Code r. 335-3-14-.04 Anti-PSD

Emission Point #	Description	Pollutant	Emission limits	Regulation
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	CO	CT & DB: NG Firing: 0.040 lb/MMBtu & 99.3 lb/hr FO Firing: 0.058 lb/MMBtu & 147.8 lb/hr CT: FO Firing: 0.0608 lb/MMBtu & 101.0 lb/hr	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	VOC	CT & DB: NG Firing: 0.0074 lb/MMBtu & 14.3 lb/hr FO Firing: 0.008 lb/MMBtu & 18.6 lb/hr CT: FO Firing: 0.0041 lb/MMBtu & 7.5 lb/hr	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001	178 MW Natural Gas/Distillate Fuel Oil Fired Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Boiler with Selective Catalytic Reduction	Opacity	20%, except one 6 min. period/hr of ≤ 27% 10%	40 CFR 60 Subpart Da ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT

**Provisos for 178 MW Natural Gas/Distillate Fuel Oil fired
Combustion Turbine with a 585 MMBtu/hr Natural Gas Fired
Duct Burner and Heat Recovery boiler with Selective Catalytic
Reduction (SCR)**

Federally Enforceable Provisos	Regulations
<u>Applicability</u>	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16, "Major Source Operating Permits."	Rule 335-3-16
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]."	Rule 335-3-14-.04
3. The duct burner is subject to the NSPS regulations for Electric Utility Steam Generating Units, Subpart Da of 40 CFR Part 60.	Rule 335-3-10-.02(2)(a)
4. The combustion turbine is subject to the NSPS regulations for Stationary Gas Turbines, 40 CFR Part 60 Subpart GG.	Rule 335-3-10-.02(33) 40 CFR 60 Subpart GG
5. This source is subject to the applicable requirements of Subpart A, the General Provision of 40 CFR Part 60.	Rule 335-3-10-.02(1)
6. This source subject to the Acid Rain Rules contained in Rule 335-3-18 and 40 CFR Part 72, 75, and 76. The applicable Acid Rain Permit is contained in the Acid Rain portion of this Operating Permit.	Rule 335-3-18 and 40 CFR Parts 72, 75, and 76
7. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated as enforceable conditions of this permit.	Rule 335-3-16-.05(a)2
8. This source is subject to the applicable provisions of the Cross State Air Pollution Rule found in ADEM Admin. Code r. 335-3-5-.06 through 335-3-5-.36 and ADEM Admin. Code r. 335-3-8-.07 through 335-3-8-.65	Rules 335-3-5-.06 through 335-3-5-.14 and Rules 335-3-8-.07 through 335-3-8-.65
<u>Emission Standards</u>	
1. The nitrogen oxide emission rate from the combined turbine/duct burner stack shall not exceed 0.013 lb/MMBtu & 32.4 lb/hr while firing natural gas and 0.167 lb/MMBtu & 377.8 lb/hr while firing fuel oil. The nitrogen oxide emission rate shall be monitored using a rolling three-hour average computed by the continuous emission monitor system.	Rule 335-3-14-.04(9)(b) BACT

Federally Enforceable Provisos	Regulations
2. The nitrogen oxide emission rate from the combustion turbine shall not exceed 0.167 lb/MMBtu & 331.0 lb/hr while firing fuel oil. The nitrogen oxide emission rate shall be monitored using a rolling three-hour average computed by the continuous emission monitor system.	Rule 335-3-14-.04(9)(b) BACT
3. The carbon monoxide emission rate from the combined turbine/duct burner stack shall not exceed 0.40 lb/MMBtu & 99.3 lb/hr while firing natural gas and 0.058 lb/MMBtu and 147.8 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) Anti-PSD
4. The carbon monoxide emission rate from the combustion turbine shall not exceed 0.0608 lb/MMBtu & 101.0 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) Anti-PSD
5. The volatile organic compound emission rate from the combined turbine/duct burner stack shall not exceed 0.0074 lb/MMBtu & 14.3 lb/hr while firing natural gas and 0.008 lb/MMBtu & 18.6 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) BACT
6. The volatile organic compound emission rate from the combustion turbine shall not exceed 0.0041 lb/MMBtu & 7.5 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) BACT
7. The particulate matter emission rate from the combined turbine/duct burner stack shall not exceed 0.009 lb/MMBtu & 14.2 lb/hr while firing natural gas and 0.011 lb/MMBtu & 21.7 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) BACT
8. The particulate matter emission rate from the combustion turbine shall not exceed 0.014 lb/MMBtu & 17.0 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) BACT
9. Sulfur dioxide emissions from the combined turbine/duct burner stack shall not exceed 0.00094 lb/MMBtu & 1.7 lb/hr while firing natural gas and 0.038 lb/MMBtu & 97.6 lb/hr while firing fuel oil.	Rule 335-3-14-.04(9)(b) BACT
10. Sulfur dioxide emissions from the combustion turbine shall not exceed 0.049 lb/MMBtu & 97.0 lbs/hr while burning fuel oil.	Rule 335-3-14-.04(9)(b) BACT
11. Visible emission from the combined turbine/duct burner stack shall not exceed 10% opacity.	Rule 335-3-14-.04(9)(b) BACT
12. Nitrogen Oxides emissions from the combustion turbine shall not exceed 75 ppmv adjusted for heat rate and fuel bound nitrogen, based upon 4-hour rolling averages.	Rule 335-3-10-.02(33) 40 CFR 60 Subpart GG

Federally Enforceable Provisos	Regulations
13. Nitrogen Oxides emissions from the duct burner shall not exceed 1.6 lb/MWh based upon 30 day rolling averages.	Rule 335-3-10-.02(2)(a) 40 CFR 60 Subpart Da
14. Sulfur dioxide emissions from the combustion turbine shall not exceed 0.015 percent by volume on a dry basis at 15% oxygen or the sulfur content of all fuels burned in the combustion turbines shall not exceed 0.8% by weight.	Rule 335-3-10-.02(33) 40 CFR 60 Subpart GG
15. Sulfur dioxide emissions from the duct burner shall not exceed 0.20 lb/MMBtu.	Rule 335-3-10-.02(2)(a) 40 CFR 60 Subpart Da
16. Particulate emissions from the duct burner shall not exceed 0.03 lb/MMBtu.	Rule 335-3-10-.02(2)(a) 40 CFR 60 Subpart Da
<p>17. Exceptions to the Rules and Regulations for provisos 1-11 above are granted for startup, shutdown, load change, and during turbine fuel transfer from natural gas to distillate fuel oil or from distillate fuel oil to natural gas as defined below:</p> <p>Startup – Exemptions due to startup shall cease 35-minutes after the combustion turbine meets the Department approved start-up point. The Department must approve in writing any change to the start-up point prior to modifying such point.</p> <p>Shutdown – Exemptions due to shutdown shall commence upon initiation of shutdown or due to a failure of the unit.</p> <p>Load Change – Exemptions due to combustion turbine load change shall commence when the combustion turbine increases or decreases in load at a rate approved by the Department. The Department must approve in writing any change to the load rate point prior to modifying such point.</p> <p>Fuel Transfer – Exemptions due to fuel transfer shall commence upon initiation of the fuel transfer.</p>	Rule 335-3-4-.01(c)
18. The combustion turbine shall fire only natural gas and distillate fuel oil. The sulfur content of the distillate fuel oil shall not exceed 0.05% by weight. The duct burner shall fire only natural gas.	Rule 335-3-14-.04(9)(b) BACT
19. The combustion turbine shall not burn more than 9,100,000 gallons of distillate fuel oil in any consecutive 12-month period.	Rule 335-3-14-.04 BACT
20. Emissions exceeding any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder are prohibited.	Rule 335-3-16-.05(d)

Federally Enforceable Provisos	Regulations
21. The owners and operators of each source subject to the Cross State Air Pollution Rule (CSAPR) shall comply with all applicable provisions of Rules 335-3-5-.06 through 335-3-5-.36 and Rules 335-3-8-.07 through 335-3-8-.65	Rules 335-3-5-.06 through 335-3-5-.36 and Rules 335-3-8-.07 through 335-3-8-.65
22. In the absence of CSAPR, the owners and operators of each affected source shall comply immediately upon the compliance date of any such rule that replaces or supplements CSAPR.	General Provisos 11(b) and 14
<u>Compliance and Performance Test Methods and Procedures</u>	
1. Compliance with the Nitrogen Oxides emissions standards shall be determined by EPA Reference Method 20 or 7E as found in Appendix A of 40 CFR 60. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
2. Compliance with the Carbon Monoxide emissions standards shall be determined by EPA Reference Method 10 as found in Appendix A of 40 CFR 60. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
3. Compliance with the Volatile Organic Compounds emissions standards shall be determined by EPA Reference Method 25, 25A, or 25B, as found in Appendix A of 40 CFR 60. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
4. Compliance with the particulate emissions standards shall be determined by EPA Reference Method 5 or 17, as found in Appendix A of 40 CFR 60. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
5. Compliance with the sulfur dioxide emissions standards shall be determined by 40 CFR 75, Appendix D or by EPA Reference Method 6, 6A, or 6B, as found in Appendix A of 40 CFR 60. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
6. Compliance with the fuel sulfur content limits shall be determined by ASTM D129-91, D1552-90, D2622-92, D4294-90, D 1072-80 or 90 (Reapproved 1994), D 3031-81, D 40840-82 or 94, or D 3246-81, 92, or 96, or the latest editions or test methods approved by 40 CFR Part 75 (as currently incorporated or as amended). Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
7. Compliance with the opacity standards shall be determined by EPA Reference Method 9 as found in Appendix A of 40 CFR 60.	Rule 335-3-1-.05
<u>Emission Monitoring</u>	
1. The continuous emissions monitoring system (CEMS) to	Rule 335-3-14-.04

Federally Enforceable Provisos	Regulations
<p>measure nitrogen oxide emissions shall continue to be operated at a location approved by the Director. The nitrogen oxide emission rate shall be monitored using a rolling three-hour average computed by the continuous emission monitor system. The CEMS shall meet the specifications and procedures of 40 CFR Part 75 and will be certified and maintained in accordance with 40 CFR Part 75.</p>	<p>BACT 40 CFR 75</p>
<p><u>Recordkeeping and Reporting Requirements</u></p>	
<p>1. Records of the sulfur content of the distillate fuel oil burned in the combustion turbine shall be kept in a form suitable for inspection for a period of at least five years.</p>	<p>Rule 335-3-14-.04</p>
<p>2. Records of the monthly and rolling 12-month totals of distillate fuel oil usage in the combustion turbine shall be maintained in a form suitable for inspection for a period of at least five years.</p>	<p>Rule 335-3-16-.05(c)</p>
<p>3. An excess emissions report for the combined turbine/duct burner stack as defined by 40 CFR Part 60 , Subpart A, §60.7(c) and (d), shall be submitted to the Department within thirty days of the end of each calendar quarter in the following format:</p>	<p>Rule 335-3-16-.05(c)</p>
<p><u>NO_x</u></p> <p>A. Source Operating Time (all times and periods in hours)</p> <p>B. Time Monitoring System was Able to Record Source Performance *</p> <p>C. Monitor Availability (%) = $B/A \times 100$</p> <p>D. Total Excess Emission Periods where the CEM data may indicate emissions above standards **</p> <p>E. Overall Source Performance (%) = $[(B - D)/B] \times 100$</p> <p>F. Exempt Periods (as applicable) - F(x)</p> <p style="padding-left: 20px;">F1 = Startup/Shutdown</p> <p style="padding-left: 20px;">F2 = Load Change</p> <p>G. Net Excess Emissions – G(x) = D – F(x)</p>	

Federally Enforceable Provisos	Regulations
<p>H. Net Source Performance (%) - H(x):</p> $= [1 - (G(x)/(B - F(x)))] \times 100$ $= [(B - F(x) - G(x))/(B - F(x))] \times 100$ <p>I. Overall Exceedances (%) - Percent of time above the standard due to all reasons:</p> $= (D/B) \times 100$ <p>J. Net Exceedances (%) - Percent of time above the standard due to non-exempt reasons:</p> $= [(B - F(x))/B] \times 100$ <p>K. Exempt Period Exceedances (%) - Percent of time above the standard due to an exempted reason</p> <p>SU/SD = $(F_1/B) \times 100$</p> <p>Load Change = $(F_2/B) \times 100$</p> <p>* Information identifying each period during which the monitoring systems were inoperative (except for zero and span checks) and the nature of the system repairs or adjustments will be maintained and made available upon request.</p> <p>** Report date, time duration, magnitude, cause and corrective action taken for each occurrence. NO_x emissions rate (lb/MMBtu) will be computed as a 3-hour rolling average.</p> <p>NOTE: Data recorded during periods of system breakdowns, repairs, adjustments, and calibration checks shall not be included in any of the above data averages.</p> <p>NOTE: 40 CFR Part 60, Subpart A, §60.7(d) provides additional requirements concerning identification of the monitoring system, changes to the monitoring system, process or controls and certification of the report.</p>	
<u>Acid Rain Requirements</u>	
<p>1. This unit is subject to the Acid Rain rules contained in Rule 335-3-18 and 40 CFR Parts 72, 73 and 75. Applicable Acid Rain permits are contained in the Acid Rain portion of this Operating Permit.</p>	<p>Rule 335-3-18</p> <p>40 CFR Parts 72, 73 and 75</p>
<u>CSAPR Requirements</u>	
<p>1. These units are subject to the Cross-State Air Pollution Rule (CSAPR) and shall comply with all applicable provisions of Rules 335-3-5-.06 through 335-3-5-.36 and Rules 335-3-8-.07 through 335-3-8-.65.</p>	<p>Rules 335-3-5-.06 through 335-3-5-.36 and Rules 335-3-8-.07 through 335-3-8-.65</p>

Summary Page for MACT Subpart ZZZZ – Existing Emergency Firewater Pump

Permitted

Operating Schedule: 24 Hrs/day x 7 Days/week x 52 Weeks/yr = 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	PM	N/A	N/A
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	SO ₂	N/A	N/A
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	NO _x	N/A	N/A
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	CO	N/A	N/A
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	VOC	N/A	N/A
003	240 HP Existing Diesel Fuel Oil Fired Firewater Pump	Opacity	See General Provisos	Rule 335-3-4-.01(1)

Provisos for MACT Subpart ZZZZ – Existing Emergency Firewater Pump

Federally Enforceable Provisos	Regulations
<u>Applicability</u>	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.	Rule 335-3-16-.03
2. This source is subject to the applicable requirements of 40 CFR Part 63 Subpart ZZZZ, “National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE)”.	40 CFR Part 63 Subpart ZZZZ
3. This source is subject to the applicable requirements of Subpart A of 40 CFR Part 63, "General Provisions" as listed in Table 8 of Subpart ZZZZ.	40 CFR Part 63 Subpart ZZZZ
<u>Emission Standards</u>	
1. This source is subject to the applicable requirements listed in Table 2d of 40 CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	40 CFR §63.6603
2. The Permittee must operate and maintain this unit according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	40 CFR §63.6625(e)(3)
3. The firewater pump shall be equipped with a non-resettable hour meter.	40 CFR §63.6625(f)
4. This unit may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of these units are limited to 100 hours per year. There is no time limit on the use of these units in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond	40 CFR §63.6640(f)

Federally Enforceable Provisos	Regulations
<p>100 hours per year . This unit may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in 40 CFR 63 Subpart ZZZZ, is prohibited.</p>	
<p>5. Starting January 1, 2015, this unit must use diesel fuel that meets the requirements of non-road diesel fuel as specified in 40 CFR 80.510(b), except that any diesel fuel purchased prior to January 1, 2015, may be used until depleted.</p>	<p>40 CFR 60 §63.6604(b)</p>
<p>6. This unit must minimize the time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2d apply.</p>	<p>40 CFR 60 §63.6625(h)</p>
<p><u>Compliance and Performance Test Methods and Procedures</u></p>	
<p>1. Method 9 of 40 CFR (Latest Edition) Part 60, Appendix A shall be used in the determination of the opacity.</p>	<p>Rule 335-3-1-.05</p>
<p><u>Emission Monitoring</u></p>	
<p>1. The Permittee shall perform the following activities:</p> <ul style="list-style-type: none"> (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. <p>Or utilize an oil analysis program as described in §63.6625(i).</p>	<p>40 CFR Part 63 Subpart ZZZZ Table 2d §63.6625(i)</p>

Federally Enforceable Provisos**Regulations**

- | | | |
|----|--|---------------------------------|
| 2. | If an oil analysis program is utilized for a stationary compression ignition engine, the Permittee must perform the oil analysis at the same frequency specified above for changing the oil. The Permittee must at a minimum analyze the following parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new, viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new, or percent water content (by volume) is greater than 0.5. If any of the limits are exceed, the Permittee must change the oil within 2 business days of receiving the results of the analysis or before commencing operation, whichever is later. | 40 CFR Subpart ZZZZ §63.6625(i) |
|----|--|---------------------------------|

Recordkeeping and Reporting Requirements

- | | | |
|----|--|---------------------------------|
| 1. | The Permittee must keep records of the parameters that are analyzed as part of the oil analysis program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. | 40 CFR Subpart ZZZZ §63.6625(i) |
| 2. | The Permittee must keep records of the maintenance conducted on this unit in order to demonstrate that you operated and maintained this unit and after-treatment control device (if any) according to your own maintenance plan or according to manufacturer's written instructions. | 40 CFR §63.6655(e) |
| 3. | The Permittee must keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. The facility must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. | 40 CFR §63.6655(f) |